

## CHAIN OF CUSTODY RECORD

## REGION 5

**77 West Jackson Boulevard**

**Chicago, Illinois 60604**

5-140061

Project No. 02AH55 Project Name CHESHIRE MONITORING STUDY 90101A  
AIR 0207002 ARRIVAL DATE 7/10/2002 DUE DATE 8/9/2002

**Sampler**

Mike Murphy

Cooler ID 02AH551 Page 5-140061

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH55D01	D01	25/06/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340244 1 to 1

Bottle No. 1

Parameter

PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH55S01	S01	25/06/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340243 1 to 1

Bottle No. 1

Parameter

PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH55S02	S02	25/06/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	RVHS	1	5-340245 1 to 1

Bottle No. 1

Parameter

PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH55S03	S03	25/06/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	ADDAVILLE	1	5-340246 1 to 1

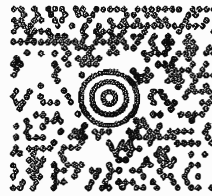
Bottle No. 1

Parameter

PM10

**FROM:**  
SOUTHEAST DISTRICT OFFICE  
(740) 385-8501  
OHIO EPA  
2195 E. FRONT STREET  
LOGAN OH 43138-8637

**2 LBS 1 OF 1**



**IL 606 9-08**



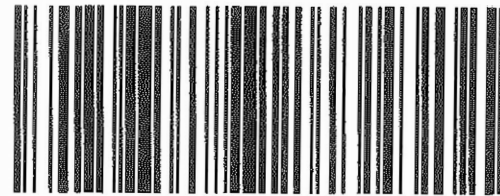
**SHIP TO:**

**WILLIAM SARGENT JR.**  
USEPA CENTRAL REGIONAL LABORATORY  
10 FLOOR  
536 SOUTH CLARK STREET  
**CHICAGO IL 60605**

**UPS NEXT DAY AIR**

TRACKING #: 1Z 401 199 01 4061 1967

**1**



**BILLING: P/P**

UOW 41.16 Konica F 18.0A 04/2002

Fold here and place in label pouch

**CENTRAL REGIONAL LABORATORY**  
Data Checklist

Data Set AIR 0207 002 CHESHIRE MONITORING

☒ Chain of Custody

☒ Transmittal Report w/signatures of the following:

- Analyst(s)
- Environmental Data Coordinator

Prepared by: Sylvia Pripp 8-8-02  
Environmental Data Coordinator

Revised 8/6/02



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

AUG 08 2002

Date:

Subject: Review of Region 5 Data for **CHESHIRE MONITORING STUDY**

From: **Francis A. Awanya, Chemist** *F.A.A.*  
Region 5 Central Regional Laboratory

To:

Attached are the results for: **CHESHIRE MONITORING STUDY**

CRL work order number: **0207002**

Samples analyzed for: **Suspended Particles**

Results are reported for sample designations: **2002AH55S01, 2002AH55D01, 2002AH55S02, and 2002AH55S03.**

AUG 0 8 2002

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Data Management Coordinator and Date Received

Date Transmitted: AUG 0 8 2002

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Received by and Date

Comments:

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
<b>B</b>	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
<b>J</b>	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
<b>M</b>	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL <u>M</u> ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is <u>estimated</u> since it falls below the lowest calibration standard in the calibration curve.
<b>N</b>	This flag applies to GC/MS <u>T</u> entatively Identified Compounds (TICs) that have a mass spectral library match.
<b>Q</b>	This flag applies to analyte data that are severely estimated due to quality control and/or <u>Q</u> uantitation problems, but are confirmed to be qualitatively present in the sample. <u>No value is reported with this qualification flag.</u>
<b>R</b>	This flag applies to analyte data that are <u>R</u> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
<b>U</b>	This flag is used when the analyte was analyzed for but <u>U</u> ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.



Environmental Protection Agency Region 5  
**Central Regional Laboratory**

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

**WORK ORDER**

Printed: 7/30/02 2:55:43PM

**0207002**

**US EPA Region 5 Central Regional Laboratory**

**Client:** Air Division, US EPA Region 5  
**Project:** Gavin, Cheshire. Ohio

**Project Manager:** Marilyn Jupp  
**Project Number:** [none]

**Report To:**

Kathy Triantafillou  
Air Division, US EPA Region 5

77 West Jackson Boulevard  
Chicago, IL 60605

Phone: (312) 353-4775  
Fax: (312) 353-2001

**Date Due:** Aug-10-02 15:00 (30 day TAT)

**Received By:** William Sargent

**Date Received:** Jul-10-02 16:29

**Logged In By:** William Sargent

**Date Logged In:** Jul-11-02 08:45

Samples Received at:	°C	Starts 8-3-01
All containers intact:	No	Ends 8-3-02
Sample labels/COC agree:	No	
Samples Preserved Properly:	No	
Custody Seals Present:	No	

Analysis	Due	TAT	Expires	Comments
<b>0207002-01 2002AH55D01-GHS#3012 [Air Filter] Sampled Jun-25-02 00:00 Central</b>				<b>GHS#3012, PSTG AVG=15.8</b>
PM10	Aug-08-02 12:00	28	Jul-25-02 00:00	
<b>0207002-02 2002AH55S01-GHS#3013 [Air Filter] Sampled Jun-25-02 00:00 Central</b>				<b>GHS#3013, PSTG AVG=15.9</b>
PM10	Aug-08-02 12:00	28	Jul-25-02 00:00	
<b>0207002-03 2002AH55S02 [Air Filter] Sampled Jun-25-02 00:00 Central</b>				<b>RVHS, PSTG AVG=16.3</b>
PM10	Aug-08-02 12:00	28	Jul-25-02 00:00	
<b>0207002-04 2002AH55S03 [Air Filter] Sampled Jun-25-02 00:00 Central</b>				<b>ADDAVILLE, PSTG AVG=16.0</b>
PM10	Aug-08-02 12:00	28	Jul-25-02 00:00	

ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
CENTRAL REGIONAL LABORATORY  
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION SAMPLING DATE: 06/25/2002 LAB ARRIVAL DATE: 07/10/2002 DUE DATE: 08/08/2002  
DU NUMBER: 90101A WORK ORDER NUMBER: 0207002 STUDY: CHESHIRE MONITORING STUDY PRIORITY: 1 LABORATORY :CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDED PARTICLE (g/filter)			
1	2002AH55D01	GUIDING HANDS	0.0399			
2	2002AH55S01	GUIDING HANDS	0.0422			
3	2002AH55S02	RVHS	0.0359			
4	2002AH55S03	ADDAVILLE	0.0916			
DATE OF ANALYSIS			07/26/2002			
ANALYST			<i>frs</i>			

Reviewed by: *AD*

Date: 08/08/02

Page 1 of 1

CRL SOP: HK015	Date: 07 January 2000	Revision No: 1
Data review for the Analytical and Inorganic Group		Page __ of __

# ATTACHMENT II

## CRL Analytical and Inorganics Data Review Checklist

Batch Number: 0207001, 7002, 7003, 7004 Facility: CHESHIRE MONITORING STUDY

Parameter: SUSPENDED SOLIDS CRL.SOP: AIG047

Package Overview:	YES	NO
Raw Data Package Complete?	✓	
Results Reported Correctly?	✓	
Special Requests Done?	N/A	
Calculations Checked?	✓	
Calibration Not Exceeded?	N/A	
Manual Peak Integration performed? Circle one IC or GC and Check	N/A	
Field QC Checked?	N/A	
Quality Control:		
Holding Times Met?	N/A	
Preservation Checked?	N/A	
Proper Digestion Verified?	N/A	
Initial Instrument Performance Checks Verified?	✓	
Calibration Verification Checked?	N/A	
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	N/A	
Matrix QC Checked?	N/A	
Digestion Blanks Checked?	N/A	
Spiked Blank Checked?	N/A	
LCS (if applicable) Checked?	N/A	
QCS (if applicable) Checked?	N/A	
Final Check		
Technical Review Done?	✓	
Narrative Complete?	✓	

Analyst: FAA Peer Reviewer: AO

Date: 7/31/2002 Date: 8/1/02

Comments Attached? (Y/N) \_\_\_\_\_

<b>Data Set Number:</b>	<u>0207002</u>	<b>Parameter:</b>	<u>Suspended Particles</u>
<b>Facility Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Study Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Date of Narrative:</b>	<u>07/30/2002</u>	<b>Analyst:</b>	<u>FAA</u>
<b>Prepared by:</b>	<b>Signature:</b> _____		

### ANALYSIS CASE NARRATIVE

Four (4) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on July 10, 2002. Those filters were fractions of clean filters, prepared at the CRL and sent to the field for exposure. Filter identification numbers and other pertinent information obtained from the individual filters and packaging envelopes are presented in the table below.

Filters ID	Samples ID	Tag Number
Q8609531	2002AH55D01	5-340244-1
Q8609532	2002AH55S01	5-340243-1
Q8609533	2002AH55S02	5-340245-1
Q8609534	2002AH55S03	5-340246-1

Filter equilibrations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters began on 07/23/2002 and was completed on 07/26/2002. All exposed filters were in good conditions. No sampler serial numbers were provided by the field for filter G8609533 (CRL Sample I.D 2002AH55S02) and G8609534 (CRL Sample I.D 2002AH55S03). The envelope containing sample 2002AH55S02 was labeled with filter I.D number G8609553. The actual filter in the envelope was I.D Number G8609533. This was the number used.

Holding time was incorrectly calculated in CRL LIMS and reported on work order form 0207002 to be July 25, 2002. PM10 analysis has no set holding time in the SOP used.

### QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

***Tears in filters;*** A tear was observed in exposed filter Q8609532 (CRL sample I.D number 2002AH55S01). All the pieces appear to be preserved in the filter. Use the data with caution. The result could be biased low due to loss of material.

### SAMPLE RESULTS:

All the sample results are acceptable for use.

<b>Data Set Number:</b>	<u>0207002</u>	<b>Parameter:</b>	<u>Suspended Particles</u>
<b>Facility Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Study Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Date of Narrative:</b>	<u>07/30/2002</u>	<b>Analyst:</b>	<u>FAA</u>
<b>Prepared by:</b>	<u>Signature:</u>		

**ANALYSIS CASE NARRATIVE**

**ELECTRONIC DATA:**

No electronic data.

# CHESHIRE AIR MONITORING PROJECT

## PM10

Parameter: Suspended Particles

Work Order Numbers: 0207001, 0207002, 0207003, 0207004

Date of Analysis 07/26/2002

Analyst: FAA

### BALANCE VERIFICATION:

Standard Weights	Balanced weight	Differences
Actual (g)	Balanced (g)	(g)
Limit +/-0.0005 g		
1.0000	1.0001	-0.0001
2.0000	2.0000	0.0000
5.0000	5.0000	0.0000

### QC-SUMMARY FOR EXPOSED FILTERS

Filter ID	CRL Sample	Sampling	ANALYST	Exposed
Number	I.D Number	Date		weight (g)
Q8609541	2002AH57S03	07/07/02	Analyst 1	4.4431
Q8609541	2002AH57S03	07/07/02	Analyst 2	4.4430
Differences (Limit +/- 5 mg).....				0.0001
Q8609548	2002AH54D01	06/19/02	Analyst 1	4.4291
Q8609548	2002AH54D01	06/19/02	Analyst 2	4.4292
Differences (Limit +/- 5 mg).....				-0.0001
Q8609552	2002AH54S02	06/19/02	Analyst 1	4.4318
Q8609552	2002AH54S02	06/19/02	Analyst 2	4.4318
Differences (Limit +/- 5 mg).....				0.0000

**CHESHIRE AIR MONITORING PROJECT**  
**PM10**

Filter ID Number	CRL Sample I.D Number	Sampling Date	Station Location	Sampler SN	Pstg Avg	P1/Pa	Total Volume (M^3)	Pre Weight of filters (g)	Exposed weight (g)	Weight Gain	PM10 (UG/M^3)
<b>Work Order Number 0207001</b>											
Q8609548	2002AH54D01	06/19/02	Guiding Hands School	3013	15.55		0.00	4.3659	4.4291	0.0632	ERR
Q8609547	2002AH54S01	06/19/02	Guiding Hands School	3012	15.85		0.00	4.3662	4.4304	0.0642	ERR
G8609552	2002AH54S02	06/19/02	RVHS	-	16.10		0.00	4.3665	4.4318	0.0653	ERR
Q8609549	2002AH54S03	06/19/02	Addaville	-	15.75		0.00	4.3849	4.4356	0.0507	ERR
<b>Work Order Number 0207002</b>											
Q8609531	2002AH55D01	06/25/02	Guiding Hands School	3013	15.90		0.00	4.3346	4.3745	0.0399	ERR
Q8609532	2002AH55S01	06/25/02	Guiding Hands School	3012	15.80		0.00	4.3574	4.3996	0.0422	ERR
G8609533	2002AH55S02	06/25/02	RVHS	-	16.30		0.00	4.3820	4.4179	0.0359	ERR
Q8609534	2002AH55S03	06/25/02	Addaville	-	16.00		0.00	4.3544	4.4460	0.0916	ERR
<b>Work Order Number 0207003</b>											
Q8609535	2002AH56D01	07/01/02	Guiding Hands School	3013	15.95		0.00	4.3563	4.4383	0.0820	ERR
Q8609536	2002AH56S01	07/01/02	Guiding Hands School	3012	15.60		0.00	4.3340	4.4154	0.0814	ERR
Q8609538	2002AH56S03	07/01/02	Addaville	-	15.80		0.00	4.3530	4.4383	0.0853	ERR
<b>Work Order Number 0207004</b>											
Q8609539	2002AH57D01	07/07/02	Guiding Hands School	3013	15.70		0.00	4.3775	4.4191	0.0416	ERR
Q8609540	2002AH57S01	07/07/02	Guiding Hands School	3012	15.80		0.00	4.3896	4.4373	0.0477	ERR
G8609537	2002AH57S02	07/07/02	RVHS	-	16.20		0.00	4.3840	4.4367	0.0527	ERR
Q8609541	2002AH57S03	07/07/02	Addaville	-	15.95		0.00	4.3922	4.4431	0.0509	ERR

WQ# 0207002

FILTER I.D.	TARE wt (g)	DUP wt (g)	EXPOSED wt (g)	EXPOSED wt/DUP (g)	Comments	
Q8609531	4.3346		4.3745			Q6
Q8609532	4.3574		4.3996			Q6
Q8609533	4.3820		4.4179			Q6
Q8609534	4.3544		4.4460			Q6
Q8609535	4.3563		4.4383			Q6
Q8609536	4.3340		4.4154			Q6
Q8609537	4.3840		4.4367			Q6
Q8609538	4.3530		4.4383			Q6
Q8609539	4.3775		4.4191			Q6
Q8609540	4.3896	4.3893	4.4373			Q6
Q8609541	4.3922		4.4431	4.4430 12		Q6
Q8609542	4.3772					Q6
Q8609543	4.3893					Q6
Q8609544	4.3942					Q6
Q8609545	4.3801					Q6
Q8609546	4.3690					Q6
Q8609547	4.3662	4.4304	4.4304			Q6
Q8609548	4.3659	4.4291	4.4291	4.4292 12		Q6
Q8609549	4.3849		4.4356			Q6
Q8609550	4.3860	4.3863				Q6
Q8609551	4.3948	4.4399				Q6
Q8609552	4.3665	4.4318	4.4318	4.4318 12		Q6
Q8609553	4.4153	4.4616				Q6
Q8609554	4.3975	4.4435				Q6

Tear-But  
all pieces present

WO# 0207002

GENERAL  
INFORMATION

STANDARD  
WEIGHTS

BALANCED  
WEIGHTS

SARTORIUS S/N

1.0000

1.0001

S/N 37010119

2.0000

2.0000

FAA

5.0000

5.0000

7/26/02

7/26/0122

1120131876

~~100.000~~ 100

99.9999

50

49.9998

20

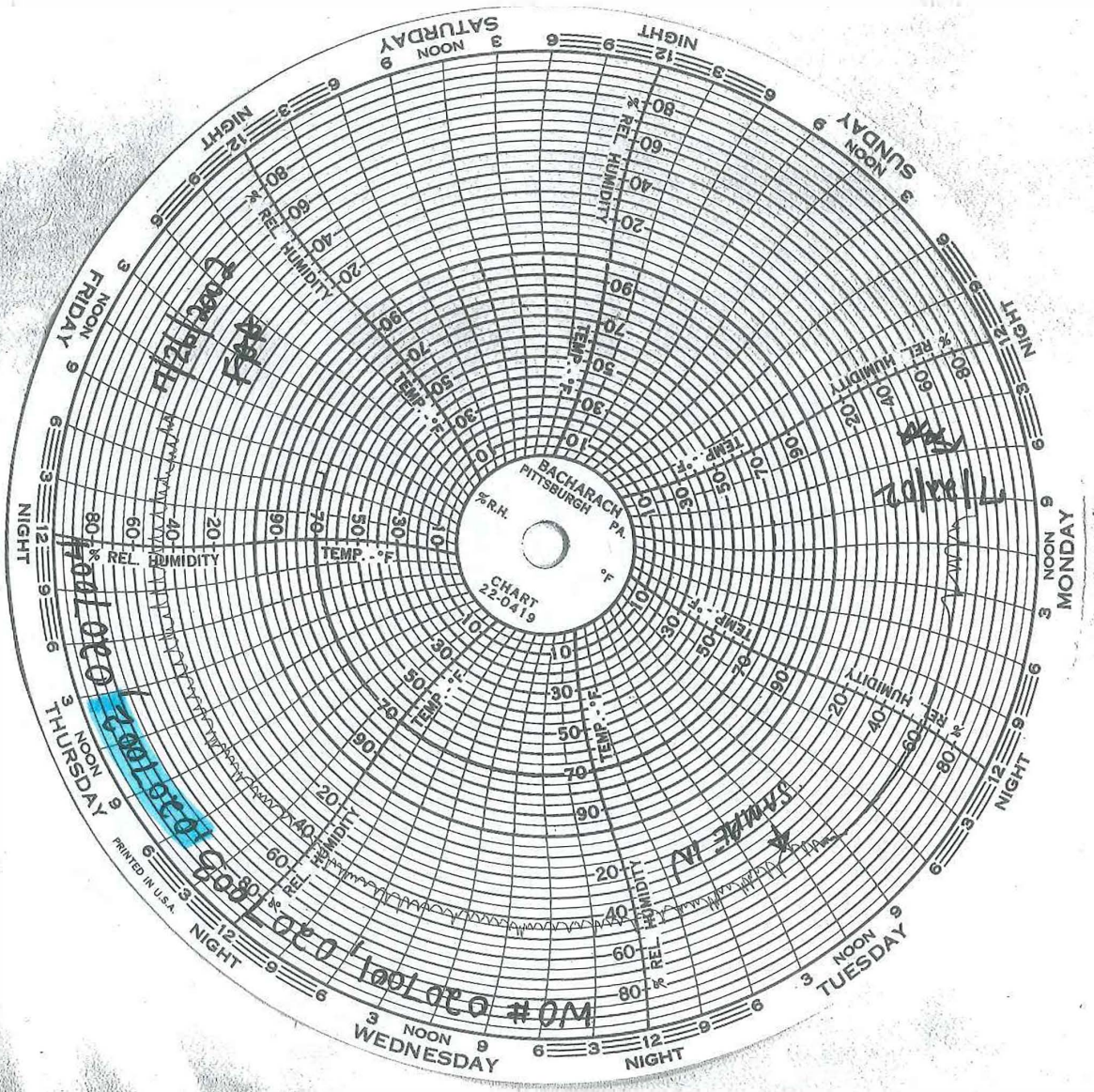
20.0002

10

10.0003

2

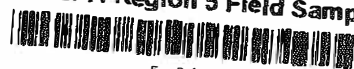
2.0001



## COMMENTS:

STD \_\_\_\_\_ ACTUAL \_\_\_\_\_  
 FLOW  $\text{m}^3/\text{min}$  \_\_\_\_\_  
 ELAPSED TIME 1440 MINUTES \_\_\_\_\_  
 AVG. RECORDER RESP. 15.9 \_\_\_\_\_  
 TSP \_\_\_\_\_  
 PM-10 ☒ AIRS ☐  
 SITE 6/5/03/013/ 860 253/  
 OPERATOR DEPA \_\_\_\_\_  
 DATE 6-25-02 \_\_\_\_\_  
 INITIAL WT \_\_\_\_\_  
 FINAL WT \_\_\_\_\_  
 PRESS mmHg \_\_\_\_\_  
 TEMP  $^{\circ}\text{C}$  \_\_\_\_\_  
 K \_\_\_\_\_  
 TOTAL FLOW  $\text{m}^3$  \_\_\_\_\_  
 SAMPLE WT  $\mu\text{g}/\text{m}^3$  \_\_\_\_\_

## US EPA Region 5 Field Sample



5-340244-1

Parameters PM10

AIR 0207002

Preservative None

Sample ID 02AH55D01

S M MD B D

X

Sampler Mike Murphy

Date 6-25-02

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete them.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any areas for improvement.

6. Throughout the process, communication and collaboration are essential. Team members should be kept informed of progress and any changes to the plan, and their input should be valued.

7. It is also important to maintain flexibility and adaptability. If the plan is not working or if new information is discovered, it may be necessary to adjust the strategy or approach.

8. Finally, it is important to celebrate success and recognize the contributions of the team. This helps to boost morale and encourages future collaboration.

5-340243-1

Parameters PM10

APR 020700Z

Preservative	None	S	M	MD	B	D
--------------	------	---	---	----	---	---



Sample ID 02AH55S01

X

sampler Nile Mustel

Date 6-25-02

COMMENTS:

AVG. RECORDER RESP. 15.4 TEMP        °C        K FINAL WT       

ELAPSED TIME 446 MINUTES PRESS        mmHg INITIAL WT       

FLOW        m<sup>3</sup>/min TOTAL FLOW        m<sup>3</sup> SAMPLE WT       

STD        ACTUAL        PM-10        ug/m<sup>3</sup>

PM-10 ☒ OPERATOR CEP/A DATE 6-25  
SITE CHS # 3012 Q 8609532  
TSP \_\_\_\_\_

2500

COMMENTS:

PM-10 ☒ AIRS ☒ OPERATOR OEPA DATE 6-25-02  
 TSP                      SITE R/HS 980553  
 AVG. RECORDER RESP. 16.3 TEMP            °C            K            FINAL WT             
 ELAPSED TIME 1440 MINUTES            PRESS            mmHg INITIAL WT             
 FLOW            m<sup>3</sup>/min TOTAL FLOW            m<sup>3</sup> SAMPLE WT             
 STD            ACTUAL            PM-10            ug/m<sup>3</sup>

US EPA Region 5 Field Sample



5-340245-1

Parameters PM10

*Amr 0207002*

Preservative None S M MD B D

Sample ID 02AH55S02 X

Sampler Mick Murphy

Date 6-25-02

US EPA Region 5 Field Sample



5-340246-1

Parameters PM10

AKR 0207002

Preservative None S M M D B D

Sample ID 02AH55S03 X

Sampler Mike Muepht

Date 6-25-02

AIRS

PM-10

TSP

SITE Adelle

Q 8605534

OPERATOR OEPH

DATE 6-25-02

AVG. RECORDER RESP.

16.0

TEMP

°C

K

FINAL WT

ELAPSED TIME

1440

MINUTES

PRESS

mmHg

INITIAL WT

FLOW

m<sup>3</sup>/min

TOTAL FLOW

m<sup>3</sup>

SAMPLE WT

STD

ACTUAL

PM-10

ug/m<sup>3</sup>

COMMENTS: